

Having thus described the invention, what is claimed as new and secured by Letters Patent is:

Claims

1. A method of balancing voice and data traffic in a wireless communications network, said method comprising the steps of:
 - establishing a maximum load value for at least one of a voice or data traffic on a carrier; and
 - maintaining loading on said carrier at a level no greater than said established maximum load value.
2. The method as claimed in **Claim 1** wherein said established maximum load value is a voice load value.
3. The method as claimed in **Claim 1** wherein said established maximum load value is a data load value.
4. A method of balancing voice and data call loads whereby relative voice and data call loading is dynamically managed to a prescribed quality of service level.
5. The method as claimed in **Claim 4** wherein voice and data loads are maintained on different call carriers.
6. The method as claimed in **Claim 4** wherein base transceiver station transmit power is adjusted to maintain said prescribed quality of service level.
7. The method as claimed in **Claim 4** wherein intra-cell interference is maintained below a prescribed level.

8. The method as claimed in **Claim 4** wherein inter-cell interference is maintained below a prescribed level.
9. The method as claimed in **Claim 4** further comprising, implementing a migration of at least a portion of said voice or data loading from a first carrier to a second carrier.
- 10 A system operable to balance voice and data traffic in a wireless communications network, said system comprising:
a call controller operable to maintain call loading on a carrier at a level not to exceed a predetermined maximum level for at least one of voice or data traffic in the carrier.
11. The system as claimed in **Claim 10** further comprising, control means operable to effect call handoff from a first base transceiver station sector or cell site to a second base transceiver sector or cell site upon attainment of call loading for said at least one of voice or data traffic at a percentage of said predetermined maximum level.

12. A method of balancing voice and data traffic in a wireless communications network, said method comprising the steps of:

- (a) establishing a nominal value for acceptable quality of communications;
- (b) distributing voice subscribers among a plurality of carriers until a load value for each carrier exceeds said nominal value;
- (c) converting one of said carriers to a voice-only carrier;
- (d) upon said load value of all carriers other than said voice-only carrier exceeding said nominal value, admitting said new voice subscriber to said voice-only carrier;
- (e) upon said load value of said voice-only carrier falling below said nominal value, converting said voice-only carrier back to a voice and data carrier; and
- (f) repeating steps b though e.

13. The method as claimed in **Claim 12** wherein the step of converting one of said carriers to a voice-only carrier includes,
designating one carrier as said voice-only carrier, and
performing a hard handoff of data subscribers on said voice-only carrier to any carrier other than said voice-only carrier until said load value of said voice-only carrier falls below said nominal value.

14. The method as claimed in **Claim 12** wherein the step of converting one of said carriers to a voice-only carrier includes,
designating on carrier as said voice-only carrier,
performing a migration of data subscribers on said voice-only carrier to any carrier other than said voice-only carrier so long as said load value of said voice-only carrier is between a first threshold equal to said nominal value and a second threshold equal to a value greater than said nominal value, and
performing a hard handoff of data subscribers on said voice-only carrier to any carrier other than said voice-only carrier upon said load value of said voice-only carrier exceeding said second threshold.